

Electron microscopic studies on internal structures of framboidal pyrite. -Icosahedral domain structure in framboidal pyrite-

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Although there are various discussions on the formation process and the internal structure of framboidal pyrite, the detailed features have not been fully clarified. Here we show a new structure in framboidal pyrite, icosahedral domain structure. The SEM observations of pyrite framboids from various sediments revealed that the octahedral microcrystals are regularly linked by sharing of edges, and they frequently show pentagonal and trigonal patterns of arranged microcrystals in the sections. These symmetrical domain structures are reasonably interpreted as the different sections of icosahedrally arranged domains. Thus, some framboids are not spherical but are fundamentally icosahedral in shape and such a structure might be very important for a clarification of the framboid formation.